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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,482	09/07/2000	Tsutomu Yamada	YK1-0047	2320

7590 11/06/2002
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EXAMINER

BERCK, KENNETH A

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,482

Applicant(s)

YAMADA ET AL.

Examiner

Ken A Berck

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-9, 11-12 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer (US 4,143,297).

Fischer discloses (fig 11-14) a display device with a display region having a self-emissive element formed between a pair of substrates with a resin having a desiccant mixed therein is disposed between the substrates.

Regarding claim 2, Fischer discloses the substrates are adhered to one another by a sealing material disposed surrounding at least the display region.

Regarding claim 3, Fischer discloses resin having desiccant mixed therein is used as the sealing material.

Regarding claim 5, Fischer discloses the self-emissive element is an electroluminescence element.

Regarding claim 6, Fischer discloses the display region is formed on a first substrate, a second substrate is arranged facing the display region side and a color component is provided in a gap between the second substrate and the display region, the second substrate being transparent to visible light.

Regarding claim 7, Fischer discloses the display region is formed on a first substrate and a spacer composed of a desiccant is provided in a gap between the second substrate and the display region.

Regarding claim 8, Fischer discloses the self-emissive element is an organic electroluminescence element containing an organic compound in an emissive element layer.

Regarding claim 9, Fischer discloses the resin is located in a gap between the pair of substrates and covers at least the display region.

Regarding claim 11, Fischer discloses the resin fills the gap between the substrates.

Regarding claim 12, Fischer discloses the desiccant is a substance having a chemically absorptive property.

Regarding claim 36, Fischer discloses a light-emitting device with an emissive region having a self-emissive element formed between a pair of substrates and a resin having a desiccant mixed therein is disposed between the substrates.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 10, 13-35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer (US 4,143,297) in view of Ebisawa et al. (US 6,284,342).

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Fischer discloses all of the above claim limitations but fails to clearly point out the resin being cured by ultraviolet irradiation, the particle diameter of the desiccant powder being 20 μm or less, the desiccant is mixed in the resin at a ratio of at least 10 wt%, a groove formed in one of the substrates on a side facing the other substrate.

Regarding claim 14, It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the most appropriate range for the wt% of desiccant, since discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claims 4 and 10, Ebisawa discloses the resin being cured by ultraviolet irradiation in order to avoid softening of the EL structure.

Regarding claim 13, Ebisawa discloses the particle diameter of the desiccant powder being 20 μm or less in order to avoid a drop in water absorption.

Regarding claims 15-35 and 37, Ebisawa discloses a groove formed in one of the substrates on a side facing the other substrate in order to substantially eliminate the influence of moisture and have a long lifetime.

Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the display of Fischer with the resin being cured by ultraviolet irradiation in order to avoid softening of the EL structure, the particle diameter of the desiccant powder being 20 μm or less in order to avoid a drop in water absorption, and a groove formed in one of the substrates on a side facing the other substrate in order to substantially eliminate the influence of moisture and have a long lifetime, as taught by Ebisawa.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken A Berck whose telephone number is (703)305-7984. The examiner can normally be reached on Mon-Fri 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

kab 
November 3, 2002



Vip Patel
Primary Examiner
Art Unit 2879